

Ethics in Technology

The ethics of modern technology.

Course syllabus.

Instructor:	Dr. Neil R. Quinn Jr.
Office:	Center for Science, Technology and Society
Phones:	408-554-5723 school, 408-554-2726 room, 858-792-5078 home.
Office Hours:	TBA
E-Mail:	nquinn@scu.edu
Web Page:	http://cseserv.engr.scu.edu/nquinn/
Lecture:	TR 11:50 – 13:35, Room ENGR-105

The objective of this course is to equip students, involved in technologically oriented curriculums, with a set of ethical decision making tools to assist them in their careers and throughout their lives. The first part of the course will introduce students to the methodology of ethical decision making. The remainder of the course will utilize the methodology learned in the analysis of various cases taken from different technological disciplines. Each case will be presented and analyzed by students utilizing rigorous ethical methods to determine a course of action.

Class	Topic of Class	Day	Date
1	Class introduction What is Technology, what is Ethics? <ul style="list-style-type: none"> • Liberator, Threat, Instrument of Power What is Morality? Rachels Chap 1.	T	7-Jan-03
2	Morality Velasquez Chap 1.2 & 1.4., Rachels Chap 4 <ul style="list-style-type: none"> • Humanistic • Religious 	R	9-Jan-03
3	Ethics – Subjectivism in Ethics Rachels Chap 3. Utilitarianism. Rachels Chap 7. Biology <ul style="list-style-type: none"> • Cloning – http://www.pathfinder.com/TIME/cloning/ 	T	14-Jan-03
4	Ethics – Basics of Ethical Decision Making Biology – Rachels – Chap 9. <ul style="list-style-type: none"> • DNA testing 	R	16-Jan-03
5	The Internet Good/Bad, how to use it. Guest Susan Boyd. Ethical Methods – Velasquez Chap 2 pp. 82–119 <ul style="list-style-type: none"> • Rights / Justice 	T	21-Jan-03
6	Engineering <ul style="list-style-type: none"> • Confidentiality / Plagiarism – M&S 208–215. 	R	23-Jan-03
7	Engineering/ Computer (Special Class Room TBA) <ul style="list-style-type: none"> • Intellectual Property, who owns the music? Spinello Chap 4 	T	28-Jan-03
8	Engineering - Rachels Chap 5. <i>Research paper topic due</i> <ul style="list-style-type: none"> • Knowledge Transfer/Ownership • Occupational Crime – M&S 224–230. 	R	30-Jan-03
9	Biology – Barbour, 194–200. <ul style="list-style-type: none"> • Genetic Engineering (suggested reading R&A 171–215) • Therapeutic Cloning – CACC, Green, Robinson 	T	4-Feb-03

10	Chemistry / Pharmaceutical <ul style="list-style-type: none"> • Safety – M&S 299–303. • Drug testing – Schrag 80–94 	R	6-Feb-03
11	Computer - Rachels Chap 2. <ul style="list-style-type: none"> • Governing and Regulating the Internet – Spinello Chap 1&2 	T	11-Feb-03
12	Computer <i>Research paper outline due</i> <ul style="list-style-type: none"> • Censorship – S&H 255–259 – Spinello Chap 3 	R	13-Feb-03
13	Computer - Rachels Chap 6. <ul style="list-style-type: none"> • Privacy – Spinello Chap 5 	T	18-Feb-03
14	Computer – Rachels Chap 13. <ul style="list-style-type: none"> • Encryption – Spinello Chap 6 	R	20-Feb-03
15	Military <ul style="list-style-type: none"> • Nuclear Weapons – Barbour, 200–212. Military - Rachels Chap 8. <ul style="list-style-type: none"> • Biological / Chemical Weapons • Working in the defense industry. M&S 332–343 	T	25-Feb-03
16	Energy – Barbour 116–122 & 122–131. - Rachels Chap 10. <ul style="list-style-type: none"> • Fossil • Nuclear Energy – Barbour 131–135. - Rachels Chap 11. <ul style="list-style-type: none"> • Renewable • Alternative 	R	27-Feb-03
17	Environmental <i>Research paper due</i> <ul style="list-style-type: none"> • Air and Water Pollution – Barbour 57–82. 	T	4-Mar-03
18	Agricultural <ul style="list-style-type: none"> • GMF – Carbone & McLean (on the web site) Agricultural - Rachels Chap 12. <ul style="list-style-type: none"> • Food and Hunger – Barbour, 85–91. • Food production 	R	6-Mar-03
19	Agricultural - Rachels Chap 14. <ul style="list-style-type: none"> • Crop Alteration – When Biotech goes Wild 	T	11-Mar-03
20	Quarter wrap up – Final Exam preview	R	13-Mar-03
	<i>Final Exam Due</i> <i>12:10PM</i> NO LATE EXAMS WILL BE ACCEPTED!	R	20-Mar-03

Grades for the course will be determined on the basis of:

Class participation / inclass presentations.	40%
A research paper – 7-10 pages	40%
A take home final exam	20%

Class participation / case presentation: Attendance in class is mandatory. I reserve the right to deduct 5% from your overall grade for EACH class you miss during the quarter. (This is not a bluff, ask the students who have taken the course in the past). Students will participate in team presentations of two or three of the cases covered during the course. Each presentation should take approximately 40 minutes. Since this course involves technology, students will be expected to use technology to present their cases. The team should develop a presentation using either HTML or MS–Powerpoint to display the salient features of the case, describe the questions, and provide answers and/or commentary on each of the questions. The answers and/or commentary on the questions should demonstrate a grasp of ethical methods consistent with those covered in the course.

The research paper assignment presents you with an opportunity to investigate a technology issue with which you are most interested. This paper should be an analytical essay, i.e., an in-depth discussion that also defends a particular position. This research paper must utilize *at least two* high quality academic sources outside of the required readings. The course textbooks will help you identify appropriate sources (e.g., the journals that originally published the articles, footnoted material, and lists of supplementary reading), and may contain non-assigned readings pertinent to your topic. This paper should be consistent with University guidelines for research papers. Both form and content are important for the success of this assignment. **The research paper shall utilize HTML as the presentation medium.** Correct spelling, grammar, and citation of sources are expected. You will receive a more detailed set of instructions later in the quarter. This paper should be 7 – 10 pages of text in length.

The take home final exam will consist of definitions of key terms and a set of essay questions. It will be a comprehensive final exam, with material from both lectures and readings as fair game for the exam. The exam should take approximately 3 hours to complete.

The areas of the course addressing the 3 goals of the Core Curriculum Technology Requirement are:

To develop skills (uses of applications, knowledge of networking, etc.) === Students learn and use the computer based applications of Powerpoint, HTML authoring.

To develop such "critical thinking" as is fostered by technology (algorithmic thinking, etc.) === Students will give presentations in various areas of technology, demonstrating a thorough understanding of the area.

To study and foster social analysis of technology (social impact of technology, ethical issues in technology, justice issues, economic issues, "sensitivity to human community," etc.) === Students will analyze a number of different areas of technology and the ethical issues arising from these technologies.

References

There will be three required texts:

- Rachels** "The Elements of Moral Philosophy"; 3rd ed., © 1993,1986,1998; James Rachels; (McGraw-Hill Companies; ISBN: 0070525609; Format: Paperback, 3rd ed., 231pp.)
- Barbour** "Ethics in an Age of Technology"; ©1993; Barbour, Ian; (HarperSanFrancisco; ISBN: 0-06-060935-4)
- Spinello** "Cyber Ethics: Morality and law in Cyberspace"; ©2000; Spinello, Richard; (Jones and Bartlett Publishers, Inc., Sudbury, MA 01776; ISBN: 0-7637-1269-8)

In addition, a course packet will be available on-line containing selected readings from the following works.

- Bereano1** BODY AND SOUL: The Price of Biotech; Philip L. Bereano; Special to The Times (first of two parts), The Seattle Times, Sunday, August 20, 1995, p.B5; <http://students.washington.edu/radin/body.htm>
- Bereano2** Patent Pending: THE RACE TO OWN DNA Guaymi tribe was surprised to discover they were invented; Philip L. Bereano; Special to The Times (Second of two parts), The Seattle Times, Sunday, Aug. 27, 1995, p.B5; <http://students.washington.edu/radin/guaymi.htm>
- CACC** "The Ethics Of Human Cloning And Stem Cell Research" Summary Notes for Members of the California State Legislature from the California Cloning Commission. <http://www.scu.edu/SCU/Centers/Ethics/publications/cloning.html>
- Green** The Ethical Considerations (of Therapeutic Cloning) Ronald M. Green, director of the Ethics Institute at Dartmouth College and chair of the ethics advisory board of Advanced Cell Technology in Worcester.
- Hart** "Ethics and Technology"; ©1994,1997; Hart, John; (First Pilgrim Press, Cleveland, OH; ISBN: 0-8298-1222-9)
- K&G** "Ethical Decision Making and Information Technology"; ©1993; Kallman, Ernest; Grillo, John; (Mitchell McGraw-Hill; ISBN: 0-07-033884-1)
- M&S** "Ethics in Engineering"; 3rd ed., ©1996; Martin, Mike; Schinzinger, Roland; (McGraw Hill, New York; ISBN: 0-07-040849-1)
- R&A** "On Behalf of God"; ©1995; Reichenbach, Bruce R.; Anderson, V. Elving; (Wm. B. Erdmans Publishing Co.; Grand Rapids, MI; ISBN: 0-8028-0727-5)
- Robinson** Therapeutic Cloning, To Create Human Organs B. A. Robinson, Ontario Consultants on Religious Tolerance
- S&H** "Ethics, Information and Technology – Readings"; ©1998; Strichler, Richard; Hauptman, Robert, editors; (McFarland & Company, Inc. North Carolina; ISBN: 0-7864-0392-6)
- Schrag** "Research Ethics: Cases and Commentaries", Vol 3; ©1999; Schrag, Brian; Ed.; NSF Grant Number SBR 9241897; Association for Practical and Professional Ethics; Bloomington, IN.
- Spinello** "Case Studies in Information and Computer Ethics"; ©1997; Spinello, Richard; (Prentice Hall Inc., New Jersey; ISBN: 0-13-533845-X)
- Velasquez** "Business Ethics: Concepts and Cases "; 4th ed., ©1998; Velasquez, Manuel G.; (Prentice Hall Inc., New Jersey; ISBN: 013350851X)